DIVISION OF OCCUPATIONAL SAFETY AND HEALTH

Together With TENNESSEE OSHA

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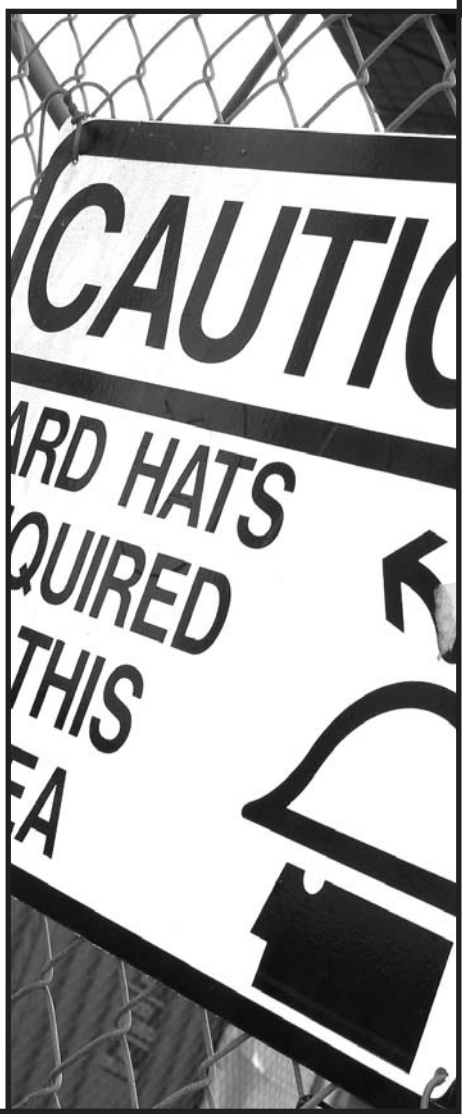
What Kills In Tennessee

Calendar Year 2004

In calendar year 2004, TOSHA investigated 46 workplace fatalities and two workplace catastrophes. Once again the incidents classified as "struck by" led the list with 19 Tennessee workers dying after they were hit by a vehicle, machine, or object in the workplace. Nine of these workers were struck by a vehicle or the arm or bucket of a vehicle (forklift, tow motor, truck trailer, road grader, track hoe arm, water truck, rail car, track hoe bucket). Three workers were struck by machinery they were working with (wood chipper cover, wood chip screener counter balance, screen printing machine). Four workers died after being struck by bundles or coils of material (steel[2], pipe, cable). The final three were struck by a scaffold frame when it collapsed, falling debris while fighting a fire, and piling during a pile driving operation.

> A window washer fell approximately 45 feet to his death when he attached his safety line to an aluminum box on the roof that was not secured to the roof.



Six workers died in falls. One died when the wire rope to which his fall protection device was attached separated at a splice allowing him to fall three floors to a concrete floor below. Another worker was killed when a handrail gave way allowing him to fall 17 feet. A window washer fell approximately 45 feet to his death when he attached his safety line to an unsecured aluminum box on the roof. A 24-year-old worker died after he fell 20 feet through a skylight on a roof where he was installing gutters. A painter died when he fell approximately 38 feet from an I-beam while removing the covering from sprinkler heads at the completion of a painting project. A building inspector died from injuries he received when he fell 11 feet through a floor opening while conducting an inspection at a residential house under construction.

Electrocutions took the lives of four workers in 2004. A 21-year-old apprentice was killed when he contacted an energized 7,200-volt power line while conducting repair work for an electric cooperative.

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What Kills In Tennessee

Two workers were electrocuted while doing electrical work on residential homes. The final electrocution occurred when an employee of a soft drink manufacturer was attempting to repair a soda fountain in a restaurant.

Three employees were caught in equipment or between two objects. One worker was killed when he was crushed by a press brake machine. Another worker became entangled in the rollers of a conveyor and the third was pinned between a tree and the bucket of an aerial lift.

Three employees died when the equipment (aerial lift, lawn mower, bucket truck) they were operating or manipulating overturned. Explosions in a chemical tank, a boiler room, and a scrap metal furnace killed another three employees. Two employees died from trench cave-ins as the result of improper shoring practices.

Six additional workers died from five different causes. One worker died when a leaking valve exposed him to very hazardous chemicals. A plumber died after he stepped on a nail at a construction site, and a security officer died when he slipped on a slippery floor and hit his head. Two construction workers were asphyxiated while working in a manhole, and one worker died while using a negative pressure respirator without a prior medical evaluation to ensure he could safely wear the respirator.

TOSHA also investigated two workplace catastrophes in 2004. A catastrophe occurs when three or more employees are sent to the hospital and kept overnight as in-patients. Both the catastrophes were related to carbon monoxide exposures from inadequately maintained forklifts.

TENNESSEE OSHA

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TOSHA ALERT

TOSHA recently issued an ALERT about the hazards present due to the use of isocyanates in the workplace. This ALERT was targeted to providers of spray-on truck bed liners in Tennessee. Isocyanates are also used in automotive paints and rigid foams. A summary of the ALERT follows:

Workers applying the spray-on truck bed liners can be exposed to very high levels of the toxic isocyanate. Also office workers, sales, staff, managers and other workers can be exposed to lower but still harmful levels of isocyanates if the spraying operation is not well controlled. Immediately or shortly after exposure to isocyanates, allergic reactions may occur in the employee. Irritation to the eyes and lungs, upset stomach and vomiting, fevers, sore throat, stuffiness of the nose, and a feeling of tightness in the chest may also occur. These symptoms may be delayed for up to eight hours after the exposure.

Certain long term health effects may occur at some later time after exposure and can last for months or years. These long term effects include the following: permanent breathing problems, including asthma even when no longer exposed; sensitization (severe asthma attacks when exposed at very low levels); skin rashes and allergic skin reactions.

Condition: A training program was not instituted for employees exposed to noise at or above an eight-hour time-weighted average (TWA) of 85 decibels (dBA).

Potential Effects: Noise above the action level may cause temporary hearing loss. This reduction in hearing can interfere with communication and may result in higher stress and accident rates. Chronic exposure to noise above the action level will produce permanent hearing loss in five to ten percent of those exposed. Training can help employees prevent overexposure at home as well as on the job.

Standard: 29 CFR 1910.95(k)(1)

Recommended Action: Institute a training program for all employees in the hearing conservation program. Train the employees upon hiring and repeat the training annually. Update the training as necessary due to changes in hearing protection or work processes. The training program must cover these topics:

- The effects of noise on hearing
- The purpose of hearing protectors, advantages and disadvantages of various types, and instructions on selection, fitting, use and care
- The purpose of audiometric testing and an explanation of the test procedures

Newsletter Correction

In the spring 2005 edition of this newsletter, there appeared an article about medical evaluations for respirator wearers. One statement made in the "TOSHA Tips" article needs further clarification. Under the Recommended Action paragraph, it was stated as follows: "For voluntary use of respirators, provide appendix D of the respirator standard only." The statement should have read as follows: "For voluntary use of filtering face piece respirators (dust masks), provide appendix D of the respirator standard only."

This means that when respirator use is not required in the workplace, employers may provide respirators at the request of employees or permit employees to use their own respirators if the employer determines that such respirator use will not itself create a hazard. The employer's only obligation to the employee who chooses to voluntarily use a filtering face piece respirator (dust mask) is to provide him or her with appendix D of the respirator standard; however, for voluntary use of other types of respirators, the employer must "establish and implement those elements of a written respiratory protection program necessary to ensure that any employee using a respiratory voluntarily is medically able to use that respirator, and that the respirator is cleaned, stored, and maintained so that its use does not present a health hazard to the user." The employer, therefore, must provide the employee with a medical evaluation prior to respirator use and establish procedures to ensure that respirators are properly cleaned, stored, and maintained.

LEARN & LIVE

A TOSHA CASE FILE SUMMARY

A 48-year old employee was killed while cleaning a wood chip screener used in the process of making wood chips into paper. Workers A and B were assigned to clean out four wood chip screeners. However, worker B had a hearing test scheduled that morning and was not available so worker A proceeded with the task himself. While he was cleaning out one of the wood screeners, worker C arrived to help, hung his lock on the #1 screener, and climbed inside to clean it out. Worker A walked back to the control room and noticed an unlocked lock hanging on the switch box. Not realizing that worker C had arrived in the area, worker A removed the lock and restarted wood chip screener #1. He then went back into the control room where he noticed some personal affects that didn't belong to him. He returned to wood chip screener #1 to investigate just as it started up. The counter balance of wood chip screener #1 struck employee C, causing a massive contusion. It took approximately 30 minutes to rescue employee C, and he seccumbed to the injury on the way to the hospital.

To prevent such an incident take the following steps:

1. Evaluate the workplace to determine if any spaces are permit-required confined spaces.
2. Inform exposed employees, by posting danger signs or by any other equally effective means, of the existence and location of the danger posed by permit spaces.
3. Identify and evaluate the hazards of permit spaces before employees enter them.
4. Develop and implement the means, procedures, and practices for safe permit space entry.
5. Affixed lockout devices in a manner that holds the energy isolating device in a "safe" or "off" position.
6. Before lockout or tagout devices are removed and energy is restored to the machine or equipment, inspect the work area to ensure that nonessential items have been removed and that machine or equipment components are operationally intact.
7. Before lockout or tagout devices are removed and energy is restored to the machine or equipment, ensure that all employees have been safety positioned or removed from the work area.
8. Ensure that each lockout or tagout device is removed from each energy isolating device only by the employee who applied the device.

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